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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,304	06/21/2001	Leo Larsen	660.305USW1	5741

22865 7590 12/29/2004

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EXAMINER
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LEE, PING

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



## Office Action Summary

**Application No.**

09/886,304

**Applicant(s)**

LARSEN ET AL.

**Examiner**

Ping Lee

**Art Unit**

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 11 is/are allowed.  
6) ☒ Claim(s) 1-10 and 12-17 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

DETAILED ACTION

***Claim Objections***

1. Claim 2 is objected to because of the following informalities:  
  
regarding claim 2, line 3, "from" should be corrected as --for--;  
  
regarding claim 12, line 9, --elements--should be added at the end of the line.  
  
Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:  
  
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 2 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al (WO 98/47311) in view of Larsen (US 5,058,155).

Hall et al (hereafter Hall) discloses a headset for connection to a telephone apparatus. Regarding claim 1, Hall shows, in Fig. 1, the capsule (120) with a built-in receiver (128), a boom with a microphone (126), and manual operation elements (124). Hall teaches a general headset assembly, but fails to show the amplification and adjustment circuits. One skill in the art would have expected that any amplification and adjustment circuits could be used and placed on the Hall's circuit board (p. 3) without generating any unexpected result.

Larsen teaches an amplification and adjustment circuit (Fig. 2) for a headset. The manual adjustments switch elements for changeover are included. Although, Larson teaches that the amplification and adjustment circuit is separated from the headset, one skilled in the art would have expected that the same circuit (15) could be an integral part of the headset without changing the operation of the amplification and adjustment. Of course, with added circuit elements, one skilled in the art would have expected that the headset would weight heavier. By using a headband as a support as taught in Hall, the weight of the amplification circuit would be distributed over the head of the user instead of just a single ear. Thus, it would have been obvious to one of ordinary skill in the art to modify Hall's headset by incorporating the amplification and adjustment circuit as taught in Larsen into the circuit board (120) for providing proper signal transmitting, receiving and adjusting from and toward the telephone.

Furthermore, it was considered as a matter of design choice to use a one piece construction instead of several separate pieces. In re Larson, 144 USPQ 347 (CCPA 1965).

Regarding claim 2, Larsen shows the microphone switch (18; col. 3, lines 65-66; the potentiometer is a switch as shown in Fig. 1) and sound level operating elements (19, 20; col. 4, lines 1-3). The elements 18, 19 and 20 also simultaneously serve as manual operating elements for the setting of the amplification and adjustment circuits.

Regarding claims 6-9, Larsen shows the voice-activated switch (25) and sound level control (col. 4, lines 14-44).

Regarding claim 10, Hall and Larsen both show the battery. Larsen further shows a signal circuit (32) and the battery power controls the amplifiers.

5. Claims 1, 2, and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen in view of Hall.

Larsen discloses a headset for connecting to a telephone apparatus. Regarding claims 1, 2, and 6-10, Larsen shows, in Fig. 1, the capsule with a built-in receiver, a boom with a microphone (11). Larsen shows the manual operation elements (16-19), the wire, an amplification and adjustment circuit and the switch elements for changeover for a headset, but fails to show that these elements are to be included in the capsule with the speaker. Larsen teaches that the amplification and adjustment circuit is separated from the headset. One skilled in the art would have expected that the same circuit (15) could be an integral part of the headset (4) without changing the operation of the amplification and adjustment. Of course, with added circuit elements, one skilled in the

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art would have expected that the headset would weight heavier. Larsen's headset is a type that hooks over the ear. One skilled in the art would have expected that this type of headset couldn't support a heavier electronic housing. Hall teaches a headset with a capsule having circuit board and manual controls (p.3). Hall uses a headband to provide a sturdier support for the headset housing. Hall even teaches another embodiment with the electronic housing removed from the headset and supported by a hat. Thus, if weight an/or size is not a concern, it would have been obvious to one of ordinary skill in the art to modify Larsen's headset by incorporating the amplification and adjustment circuit into the capsule with speaker, similarly as the one shown in Hall, in order to provide an integral headset housing allowing the user to easily move around wearing the headset.

Furthermore, it was considered as a matter of design choice to use a one piece construction instead of several separate pieces. In re Larson, 144 USPQ 347 (CCPA 1965).

Regarding claim 2, Larsen shows the microphone switch (18; col. 3, lines 65-66; the potentiometer is a switch as shown in Fig. 1) and sound level operating elements (19, 20; col. 4, lines 1-3). The elements 18, 19 and 20 also simultaneously serve as manual operating elements for the setting of the amplification and adjustment circuits.

6. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of Larsen as applied to claim 1 above, and further in view of Williamson, III (US 5,371,803).

Regarding claims 4 and 5, Hall and Larsen fail to show the band pass filter.

Williamson, III (hereafter Williamson) teaches a tone control circuit, having a band pass circuit, for a headset to improve speech signal. Thus, it would have been obvious to one of ordinary skill in the art to further modify Hall's system in view of Larsen by having the tone control circuit as taught in Williamson in order to selectively attenuate the high frequency signal and enhance the speech.

7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen in view of Hall as applied to claim 1 above, and further in view of Williamson, III (US 5,371,803).

Regarding claims 4 and 5, Hall and Larsen fail to show the band pass filter.

Williamson, III (hereafter Williamson) teaches a tone control circuit, having a band pass circuit, for a headset to improve speech signal. Thus, it would have been obvious to one of ordinary skill in the art to further modify Larsen's system in view of Hall by having the tone control circuit as taught in Williamson in order to selectively attenuate the high frequency signal and enhance the speech.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of Larsen as applied to claim 1 above, and further in view of Gancarcik (US 5,832,075).

Regarding claim 3, Hall and Larsen fail to show the micro-controller. Gancarcik teaches a microcontroller for controlling a circuit generating a hook switch flash signal without interfering the call in progress. Thus, it would have been obvious to one of ordinary skill in the art to further modify Hall's system in view of Larsen by having the

microcontroller and the corresponding circuit as taught in Gancarcik in order to allow the headset to be connected to the telephone without causing any interference during the call.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen in view of Hall as applied to claim 1 above, and further in view of Gancarcik (US 5,832,075).

Regarding claim 3, Hall and Larsen fail to show the micro-controller. Gancarcik teaches a microcontroller for controlling a circuit generating a hook switch flash signal without interfering the call in progress. Thus, it would have been obvious to one of ordinary skill in the art to further modify Larsen's system in view Hall of by having the microcontroller and the corresponding circuit as taught in Gancarcik in order to allow the headset to be connected to the telephone without causing any interference during the call.

10. Claims 12, 13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of Larsen as applied to claim 1 above, and further in view of Tuoriniemi et al (US 5,978,689).

Regarding claims 12, 13 and 15-17, neither Hall nor Larsen shows at least one of the switches is capable of changing function if held depressed a predetermined period of time. Larsen teaches switch 16 having three different positions representing different microphones. By moving the switch to different position, the correct microphone type is selected. Tuoriniemi et al (hereafter Tuoriniemi) teaches another type of switch. A single switch (105) allows the user to change the operation mode by pressing this single



switch (col. 9, lines 58-67). Thus, it would have been obvious to one of ordinary skill in the art to further modify Hall and Larsen by replacing the three position switch with the single switch as taught in Tuoriniemi in order to allow the user to easily changing the operation mode without having to move the switch to different position.

11. Claims 12, 13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen in view of Hall as applied to claims 1 above, and further in view of Tuoriniemi et al (US 5,978,689).

Regarding claims 12, 13 and 15-17, neither Hall nor Larsen shows at least one of the switches is capable of changing function if held depressed a predetermined period of time. Larsen teaches switch 16 having three different positions representing different microphones. By moving the switch to different position, the correct microphone type is selected. Lemaire et al (hereafter Lemaire) teaches another type of switch. A single switch (105) allows the user to change the operation mode by pressing this single switch (col. 9, lines 58-67). Thus, it would have been obvious to one of ordinary skill in the art to further modify Larsen and Hall by replacing the three position switch with the single switch as taught in Tuoriniemi in order to allow the user to easily changing the operation mode without having to move the switch to different position.

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hall in view of Larsen and Tuoriniemi as applied to claim 12 above, and further in view of Williamson, III (US 5,371,803).

Regarding claim 14, Hall, Larsen and Tuoriniemi fail to show the band pass filter. Williamson, III (hereafter Williamson) teaches a tone control circuit, having a band pass

circuit, for a headset to improve speech signal. Thus, it would have been obvious to one of ordinary skill in the art to further modify Hall's system in view of Larsen and Tuoriniemi by having the tone control circuit as taught in Williamson in order to selectively attenuate the high frequency signal and enhance the speech.

13. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen in view of Hall and Tuoriniemi as applied to claim 1 above, and further in view of Williamson, III (US 5,371,803).

Regarding claim 14, Hall, Larsen and Tuoriniemi fail to show the band pass filter. Williamson, III (hereafter Williamson) teaches a tone control circuit, having a band pass circuit, for a headset to improve speech signal. Thus, it would have been obvious to one of ordinary skill in the art to further modify Larsen's system in view of Hall and Tuoriniemi by having the tone control circuit as taught in Williamson in order to selectively attenuate the high frequency signal and enhance the speech.

#### ***Allowable Subject Matter***

14. Claim 11 is allowable over the prior art in the record.

#### ***Response to Arguments***

15. Applicant's arguments filed 8/9/04 have been fully considered but they are not persuasive.

Applicant argued that it is not obvious to simply built the Larsen concept (US 5,5058,155) into the headset.

Larsen teaches a headset supported by the ear; while Hall teaches a headset supported by the head of the wearer using a headband. Therefore, one skilled in the art would have expected that the headset in Hall would be able to support an electronic housing with a much greater weight than the hook-over the ear type headset. Furthermore, Hall teaches that the electronic housing could be removed from the headset (abstract and p. 6, line 16+) and attached to a hat for support.

Applicant argued that the same assignee was unable to produce a workable product at the time of the Larsen invention is strong evidence that is not obvious. The fact that Larson concept was not built into the headset at the time of that invention does not mean the invention is not obvious at the time of the current invention was made. The headset in Larson '155 is a simple headset without any circuitry, so the headset can be supported by one ear. Hall teaches and suggests to have an electronic housing being built into the headset. The headset is supported by the head using a headband that is able to provide more support for a heavier housing. Hall also teaches and suggests the touch pad (124) for enabling user control. Furthermore, the Larsen invention was filed in 1989 that is more than ten years from the earliest priority date of the present invention. Technology has changed since 1989. The electronic elements could be packed into a smaller packages at the time of the present invention was made. Thus, it would have been obvious to one of ordinary skill in the art to modify Hall in view of Larsen or modify Larsen in view of Hall for the benefit of allowing the user to move around wearing the headset with the integral electronic housing.

**Conclusion**

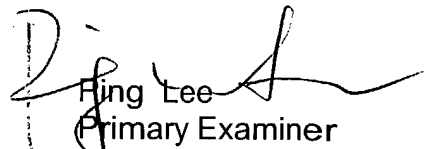
16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 703-305-4865. The examiner can normally be reached on Monday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ping Lee  
Primary Examiner  
Art Unit 2644

pwl